

The prevalence of hypertensive syndromes particular of pregnancy (GHS)

Brito, Karen Krystine Gonçalves de; Moura, Jorge Roberto Pessoa de; Sousa, Merifane Januario de; Brito, Josinalva Vieira de; Oliveira, Simone Helena dos Santos; Soares, Maria Júlia Guimarães Oliveira

Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

Empfohlene Zitierung / Suggested Citation:

Brito, K. K. G. d., Moura, J. R. P. d., Sousa, M. J. d., Brito, J. V. d., Oliveira, S. H. d. S., & Soares, M. J. G. O. (2015). The prevalence of hypertensive syndromes particular of pregnancy (GHS). *Revista de Pesquisa: Cuidado é Fundamental Online*, 7(3), 2717-2725. <https://doi.org/10.9789/2175-5361.2015.v7i3.2717-2725>

Nutzungsbedingungen:

Dieser Text wird unter einer CC BY-NC Lizenz (Namensnennung-Nicht-kommerziell) zur Verfügung gestellt. Nähere Auskünfte zu den CC-Lizenzen finden Sie hier:
<https://creativecommons.org/licenses/by-nc/4.0/deed.de>

Terms of use:

This document is made available under a CC BY-NC Licence (Attribution-NonCommercial). For more Information see:
<https://creativecommons.org/licenses/by-nc/4.0>

Federal University of Rio de Janeiro State

Journal of Research Fundamental Care Online

ISSN 2175-5361
DOI: 10.9789/2175-5361

RESEARCH

Prevalência das síndromes hipertensivas específicas da gestação (SHEG)

The prevalence of hypertensive syndromes particular of pregnancy (GHS)

Prevalencia de las síndromes hipertensivas específicas del embarazo (GHS)

Karen Krystine Gonçalves de Brito¹, Jorge Roberto Pessoa de Moura², Merifane Januario de Sousa³,
Josinalva Vieira de Brito⁴, Simone Helena dos Santos Oliveira⁵, Maria Júlia Guimarães Oliveira
Soares⁶

ABSTRACT

Objective: identifying the prevalence of Specific Hypertensive Syndromes of Gestation and outline the epidemiological profile of pregnant women. **Method:** a retrospective research, conducted in medical records of women admitted to the obstetric clinic of the University Hospital Lauro Wanderley, João Pessoa/PB, between January 2009 and December 2010. Data were collected through a questionnaire with closed questions, and analyzed descriptively. Ethical observances in research involving human subjects were contemplated. **Results:** there were analyzed 1874 records and identified 9,1% (170) records with diagnosis of SHEG. Of these 12,4% were teenagers and 40,6% were in the first pregnancy. In 100% (170) of the pathology records occurred after the 20th gestational week. Complications were identified: pre-eclampsia, eclampsia, HELLP syndrome, hypertensive crisis, intrauterine fetal death, neonatal death and prematurity. **Conclusion:** the results indicate the need for planning prenatal care, aiming at the reduction of maternal and perinatal morbidity and mortality rates. **Descriptors:** Hypertension Pregnancy-Induced, Health Profile, Pregnancy, Maternal Mortality.

RESUMO

Objetivo: Identificar a prevalência das Síndromes Hipertensivas Específica da Gestação e traçar o perfil epidemiológico das gestantes. **Método:** Pesquisa retrospectiva, realizada em prontuários de mulheres internadas na clínica obstétrica do Hospital Universitário Lauro Wanderley, João Pessoa/PB, entre janeiro de 2009 a dezembro de 2010. Os dados foram coletados através de um formulário com questões fechadas, e analisados descritivamente. Foram contempladas as observâncias éticas em pesquisas envolvendo seres humanos. **Resultados:** Foram analisados 1874 prontuários e identificados 9,1% (170) prontuários com diagnóstico de SHEG. Destes 12,4% eram adolescentes e 40,6% estavam na primeira gestação. Em 100% (170) dos prontuários a patologia ocorreu após a 20^a semana gestacional. Como complicações foram identificadas: pré-eclampsia, eclampsia, síndrome HELLP, crise hipertensiva, o óbito fetal intrauterino, o óbito neonatal e a prematuridade. **Conclusão:** Os resultados apontam a necessidade do planejamento da assistência pré-natal, objetivando a redução da taxa de morbimortalidade materna e perinatal. **Descritores:** Hipertensão induzida pela gravidez, Perfil de saúde, Gravidez, Mortalidade materna.

RESUMEN

Objetivo: identificar la prevalencia de Síndromes Hipertensivas Específicas del Embarazo y delinear el perfil epidemiológico de las mujeres embarazadas. **Métodos:** una investigación retrospectiva realizada en los prontuarios de las mujeres admitidas a la clínica obstétrica del Hospital Universitario Lauro Wanderley, João Pessoa/PB, entre enero de 2009 y diciembre de 2010. Los datos fueron recolectados a través de un cuestionario con preguntas cerradas, y analizados de forma descriptiva. Observancias éticas en la investigación con seres humanos fueron contempladas. **Resultados:** se analizaron 1.874 prontuarios e identificados 9,1% (170) de prontuarios con diagnóstico de SHEG. De ellos el 12,4% eran adolescentes y 40,6% estaban en el primer embarazo. En 100% (170) de los registros la patologia ocurrió después de la vigésima semana gestacional. Se identificaron las complicaciones: preeclampsia, eclampsia, síndrome HELLP, crisis hipertensiva, la muerte fetal intrauterina, muerte neonatal y la prematuridad. **Conclusión:** los resultados indican la necesidad de una planificación de la atención prenatal, objetivando la reducción de las tasas de morbilidad y mortalidad materna y perinatal. **Descriptores:** Hipertensión inducida en el embarazo, Perfil de salud, Embarazo, Mortalidad materna.

¹Nurse, Specialist in Nephrology from the Faculty Redentor, Master of Nursing from the Federal University of Paraíba. ²Nurse. ³Nurse, Specialist in Intensive Care Unit, Assistance Nurse of the Hospital Edson Ramalho, Master's Student of Health Sciences at the Federal University of Paraíba. ⁴Nurse. ⁵Nurse, Doctorate in Nursing from the Federal University of Paraíba, Professor of Health Technical School/UFPB and of the Postgraduate Nursing Program UFPB. ⁶Nurse, Doctorate in Nursing from the Federal University of Ceará, Titular Professor of UFPB and the Postgraduate Nursing Program UFPB.

INTRODUCTION

Gestation is a physiological phenomenon and should be seen by pregnant women and health teams as part of a healthy life experience. However, it is a borderline situation, where the pre-existence of any illness or injury gets bigger the probability of unfavorable developments in pregnancy, entailing risks for both the mother and the fetus, characterizing these women as "high-risk pregnant women".¹

According to the Ministry of Health¹ the maternal and perinatal morbidity and mortality are still very high in Brazil, statistics incompatible with the current level of economic and social development of the Country. It is known that most of the deaths and complications that arise during pregnancy, childbirth and the puerperium are preventable, but for this is required an active participation of the health system.

The ratio of maternal mortality (RMM) estimates the risk of death of women during pregnancy, abortion, childbirth or until 42 days after the birth, attributed to causes related or aggravated by pregnancy, abortion, childbirth or the puerperium by or by measures taken in relation to them. The reduction of maternal mortality is the fifth Millennium Development Goal (MDG). The goal of its reduction consists of three quarters between 1990 and 2015, what represents value equal to or less than 35 maternal deaths per 100.000 live births group. To achieve this goal, the annual reduction in Brazil should be 5,5%.²

Analyzing the trend of RMM, one observes a decrease between 1990 and 2010, of 141 deaths per 100 thousand live births for 68 maternal deaths per 100.000 live births group, which represents a decline of 52%, mainly from 2001. The two dominant causes of maternal death from direct obstetric causes, in Brazil, are high blood pressure and bleeding; however, between 1990 and 2010, the changes in the pattern of specific causes of maternal death show a 66% reduction in the risk of dying from hypertension.²

For the consensus of the National High Blood Pressure Education Program³ (NHBPEP), in identifying the forms of manifestation of hypertension in pregnancy is critical to differentiate the hypertension before pregnancy, that it's specific condition of same. At first, the elevation of blood pressure is the basic pathophysiological aspect of the disease; the second is the result of poor adaptation of the maternal organism to pregnancy, hypertension being the only one of his findings.

Specific Hypertensive Syndrome of Pregnancy (SHEG) is an instance of large maternal and perinatal morbidity and mortality, which may present as chronic hypertension (observed prior to pregnancy or until the 20th gestational week), preeclampsia (defined by the presence of hypertension and proteinuria after the 20th week of pregnancy, and may be mild or severe), eclampsia (characterized by the presence of generalized tonic-clonic seizures or coma in woman with any hypertensive framework, not caused by epilepsy or any other convulsive disease), preeclampsia superimposed on chronic hypertension (emergence of pre-eclampsia in women with chronic hypertension or kidney disease), gestational Hypertension without proteinuria.^{1,4-5}

The SHEG has a high rate of incidence and prevalence in our country, occupying the first place among the conditions of pregnant and puerperal cycle and the first cause of maternal death, particularly when installing in one of its severe forms, such as eclampsia and HELLP syndrome, interfering significantly in primiparous and multiparous women pregnancies.^{1,4-5}

Even with all scientific knowledge accumulated in recent years, the SEGH remains a syndrome that leads to serious maternal and fetal repercussions, so an individualized assistance to these patients is critical for early diagnosis is established with its interventions, providing a pregnancy with less risk to the binomial mother-child.

The role of the nurse is of extreme importance in assisting and forwarding this pregnant woman and her family orientation. The provision of a humanized, demonstrating knowledge and sensibility, support and guidance should be crucial factors in this new path that this family will follow, because the unknown increases anxiety and harms the progress of any treatment, so if she has the need for assistance to be effective.⁶

In light of the above, this article sets out to determine the prevalence of the SEGH, characterize the profile of pregnant women, according to socio-demographic variables; classify these pregnant women according to the clinical form of hypertensive syndrome; investigate the risk factors for hypertensive syndrome of pregnancy-specific.

METHOD

This is a retrospective study, with a quantitative approach, which presents the prevalence of hypertensive syndrome in pregnancy, in a teaching hospital in the city of João Pessoa/Paraíba/Brazil.

For definition of the population and sample was carried out an epidemiological survey in obstetric clinic service books of the said Hospital totaling a population of 1.874 patients in gravid phase, met during the period from January 2009 to December 2010. Later from the numbering of records available, these were fetched in the medical archive service (SAME) of the aforementioned hospital school, being at this stage selected those in which pregnant women present diagnosis for Specific Hypertensive Syndrome of Pregnancy. Obeying the criteria listed, were part of the 170 sample records.

The data were collected in the period from January to April 2011, after approval of the research by the Research Ethics Committee of the University Hospital Lauro Wanderley according to CEP/HULW Protocol No 713/10. Being using as an instrument a form, consisting of two parts, the first relating to socio-demographic data and the second related to the background and obstetrical data of women.

To determining the prevalence there were used cross-cutting measures, established mathematically by calculating obtained by the following formula:

$$\text{Prevalence rate} = \frac{\text{Number of existing cases}}{\text{Number of people in the population studied}}$$

With 95% confidence interval, measured by the formula:

$$IC\ 95\% = \pm 1.96 \sqrt{P (1 - P) / N}$$

There was used for computation of data the technic of descriptive analysis, using the Excel Statistical Editor Microsoft Windows 2007 version, presenting the results in graphs and tables, with absolute numbers and percentages.

RESULTS AND DISCUSSION

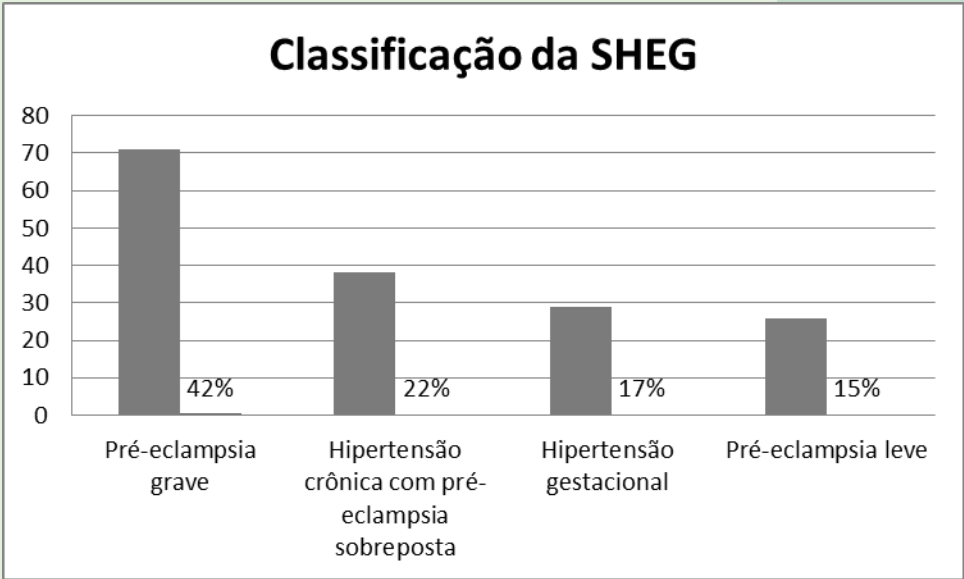
The prevalence of SEGH, from January 2009 to December 2010, accounted for 9%, with a confidence interval ranging from 4,5% and 13,5%.

The research shows that there was a predominance of primiparous with 69 (40,6%) of cases, being more common in the age group of 26 to 30 years old, 50 (29,4%), followed by 35 (20,5%) in the range of 21 to 25 years and 20 (11,7%) of 15 to 20 years. Most corresponded to the drab with 97 (57%) of the total of 89 (52,3%) of pregnant women; attended or completed high school; 90 (52,9%) lived in João Pessoa/PB and 103 (60,6%) presented family income below three minimum wages; and 128 (75,3%) presented marital status married or with stable union.

With regard to obstetric data and child mortality resulting from complications of SHEG, 7 were found (4,1%) neonatal deaths and the same percentage for intrauterine fetal deaths. The item was noted that parity 69 (40,5%) were primigests; 49 (28,8%) secondigest; 30 (17,6%) and 13 pregnant for the third time (7,6%) were multigests and in 9 (5,2%) of records there was no such information. In this study, 100% of women were in the second trimester of pregnancy (after 20 weeks) when expressed the disease. Gestational age at time of birth, was thus distributed: 80 (47,1%) of women in labor were with gestational age less than 37 weeks (pre ground); 68 (40,0%) and greater than or equal to 37 weeks and less than 41 weeks (the term); 5 (2,9%) aged greater than or equal to 41 weeks (post-term babies) and 17 (10,0%) and medical records were not in this information, because pregnant women were directed to other hospital units for various reasons.

With respect to the number of pre-natal consultations, it was found that for the 119 (70%) and records in which the patients performed more than four queries, only 2 occurred (1,2%) cases of eclampsia and 4 (2,4%) cases of HELLP syndrome. There was no maternal death. As to the type of delivery, the results were: 22 (12,9%) and vaginal births; 131 (77,1%) cesarean section and 17 (10,0%) were ignored, for transfers to other hospital units, according to records in the records.

Concerning the classification of SHEG cases, there is a higher incidence of severe pre-eclampsia with 71 (42%) of cases, followed by chronic hypertension with superimposed preeclampsia 38 (22) (Chart 1).

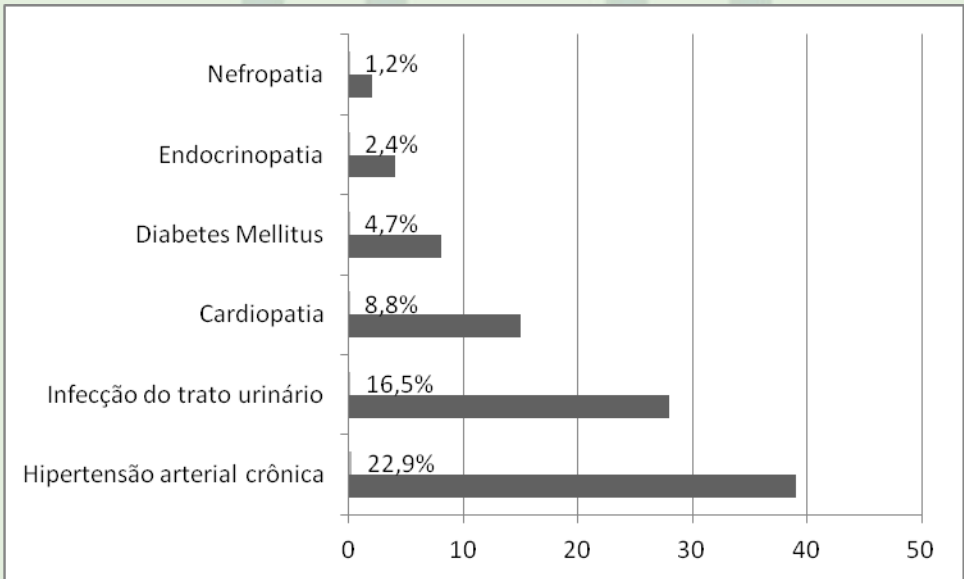


Graph 1 - Classification of cases of hypertensive syndrome of pregnancy. João Pessoa/PB, 2014.

Source: Direct Research in HULW the records. João Pessoa/PB, 2014.

Concerning the family history of patients, there were found the following information: 112 (65,9%) presented family history of chronic hypertension; 66 (38,8%) 25 (14,7%) diabetes; heart disease; 39 (22,9%) multiple pregnancy and 4 (2,4%) of pre-eclampsia in some familiar.

Now analyzing the personal history, met for a total of 170 pregnant women: 39 (22,9%) presented chronic hypertension; 28 (16,5%) reported urinary tract infection; 15 (8,8%) presented cardiopathy; 8 (4,7%) were diabetic, 4 (2,4%) and 2 (1,2%) of endocrinopathy nephropathy (graph 2).



Graph 2 - Pathological antecedents to previous pregnancies. João Pessoa/PB, 2014.

Source: Direct search in the HULW records. João Pessoa/PB, 2014.

Of the total of 101 (100%) of pregnant women with more than one pregnancy, 33 (32,7%) miscarried at least one previous pregnancy, 20 (19,8%) presented gestational hypertension, 18 (17,8%) presented history of preeclampsia, 8 (7,9%) of eclampsia and HELLP syndrome 1 (0,6%).

In Brazil, approximately 10% of pregnancies progress for high-risk pregnancy, being the SEHG, considered the main causes of maternal and fetal death, being the highest rates recorded in the Northeast and Midwest and the lower in the Southeast.⁷

Mortality associated with gravid-puerperal cycle and abortion does not appear among the top ten causes of death in the age group of 10 to 49 years old. However, the seriousness of the problem is evidenced when calling attention to the fact that pregnancy is an event related to the experience of sexuality, therefore is not a disease, and that in 92% of cases, the maternal deaths are preventable. In the last analysis, made in 2011, the maternal deaths are estimated at 69 per 1.000 live births.⁸⁻⁹ Taking into account the specific direct causes of maternal death in Brazil, those related to hypertensive syndromes had a prevalence in 2010 of 19,7%, in this case the data referenced above are of the findings in this survey.¹⁰

The sociodemographic aspects are important sources of information about the health of the population; therefore, can be measured through various indicators such as income, education and occupation. The socioeconomic condition of the pregnant woman can also influence in many ways SHEG risk. For example, the educational level hinders the relationship of the health professional and the pregnant woman, and can lead to decreased adherence to preventive and control ducts of the harms to health. Low income may lead to a greater difficulty in access to assistance by a proper health service. This information is important, including the analysis of living conditions, as well as for making policy decisions regarding the health of the population.¹¹

This work in turn, displays discrepancies with regard to education, as the level of education among most pregnant women is high school.

Associated factors were identified among pregnant women hospitalized with GHS, related to social, economic, family or personal history, supporting the majority presented in literature published in recent years, and is therefore considered as such: age between 15 and 30 years old¹²⁻¹³, mulatto¹³⁻¹⁴, first pregnancy¹²⁻¹³, gestational age at onset of the syndrome after the 20th week of pregnancy, childbirth with gestational age less than 37 weeks¹⁵⁻¹⁶, family history of hypertension¹² and diabetes, clinical history of hypertension.¹²⁻¹³ The fact that most women in this study had access to prenatal care, did not affect the development of the GHS, as observed in other studies.¹⁵

Several factors contribute to the development of the GHS, with the highest incidence when present in situations like obesity, age at the extremes of reproductive age (age below 17 and above 40 years old), family history and/or personal diabetes, hypertension, nephropathy, family or personal history of preeclampsia or eclampsia, low-protein diets and hypersodics, low education and professional activity outside the home, blood group AB, first pregnancy, multiple pregnancies, fetal hydrops and trophoblastic neoplasia.⁴

The hypertensive states of pregnancy were classified by the American College of Obstetricians and Gynecologists in three main categories. (1) pregnancy-induced hypertension (preeclampsia and eclampsia); (2) chronic hypertension preceding the pregnancy; and (3) chronic hypertension with superimposed toxemia¹⁶. The Ministry of Health¹ classifies gestational hypertension as chronic hypertension (observed before

pregnancy or before 20 weeks of gestation), preeclampsia/eclampsia (hypertension that occurs after 20 weeks of gestation or earlier, in cases of gestational trophoblastic disease or fetal hydrops, accompanied by proteinuria disappeared before 12 weeks postpartum), preeclampsia superimposed on chronic hypertension (preeclampsia in women with chronic hypertension or kidney disease), and gestational hypertension (without proteinuria).

In 20-50% of patients with gestational hypertension there is progression to pre-eclampsia. Hypertensive disorders determine high C-section rates due to maternal and fetal compromise that, in most cases it is only prevented by the interruption of pregnancy. In Brazil, like other countries, cesarean rates are too high, range from 55 to 85%, according to the type and severity of hypertension. Preeclampsia is the kind of pressure that determines the highest cesarean rate, or approximately 55%, followed by gestational hypertension (9%).¹⁸ These data support the findings of this study, where 42% of pregnant women developed severe pre-eclampsia as type of GHS, and 77,1% had cesarean delivery.

The study of maternal morbidity, especially when it comes to features and factors that causes, contributes to measure the problem, and identify the most relevant clinical conditions associated with them, which is essential in the formulation of strategies to reduce maternal mortality.¹⁹

The findings show that most of the survey participants were young people from low-income, stable union. Corroborating other studies on the subject.²⁰

To the clinical data, the highest incidence is on the severe pre-eclampsia, and the most significant factor was the rich family history of hypertension. Given these facts it can be seen that even with the existence of health programs to prenatal care, the reduction of the risks of pregnancy and improvement in maternal and newborn health indicators, there is still much to advance, much in to advance.²¹

Therefore, the results indicate the importance of holistic care by health professionals to pregnant women, focused on the adoption of prevention and control of GHS.

CONCLUSION

At the end of this study we can consider that the objective was achieved. In the investigated sample set can be inferred that the prevalence of patients with GHS, which is considered below the range when compared to other regions.

It can be observed in a significant quantity of records lack of information made it difficult to perform the analysis of some variables. Thus, this finding may be identified as a limitation.

We highlight the importance of carrying out the identification of the profile of the periodic mode of clientele in order to guiding the care and addressing the population's needs, but also to develop the improvement of the relationship between the professional and the user since from the information received users can make decisions in order to

promote their health and prevent disease and injury, and thus may take on new habits and behaviors and can trace a community-knowledge about the health-disease.²²

The supply of skilled care is an essential component for the early detection of complications, health education and consequently the reduction of maternal and fetal mortality.

REFERENCES

1. Brasil. Ministério da Saúde [Internet]. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. Gestação de alto risco: manual técnico - 5nd ed. - Brasília: Editora do Ministério da Saúde; 2012. [cited 2014 mar 18]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/manual_tecnico_gestacao_alto_risco.pdf
2. Brasil. Ministério da Saúde [Internet]. Secretaria de Vigilância em Saúde. Boletim Epidemiológico. Brasília (DF): Ministério da Saúde; 2012; 43(1). [cited 2013 dec 4]. Available from: http://portalsaude.saude.gov.br/portalsaude/arquivos/bolepi_vol_43_n1.pdf
3. National Institutes of Health. National High Blood Pressure Education Program [Internet]. Working group report on high blood pressure in pregnancy. 2000. [cited 2014 mar 6]. Available from: http://www.nhlbi.nih.gov/guidelines/archives/hbp_preg/hbp_preg_archive.pdf
4. Rezende Filho J, Montenegro CAB. Obstetrícia fundamental. 11nd ed. Rio de Janeiro: Guanabara Koogan; 2008.
5. Aguiar MIF, Freire PBG, Cruz IMP, Linard AG, Chaves ES, Rolim ILTP. Sistematização da assistência de enfermagem a paciente com síndrome hipertensiva específica da gestação. Rev Rene Fortaleza. 2010; 4(11):66-75.
6. Souza A, Menezes H, Maia S, Almeida V, Avancine B. The high risk pregnancy in view of nursing: a review study. R Pesq Cuid Fundam Online [Internet]. 2011 [cited 2014 mar 21]; 4(1): 1572-81. Available from: <http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/1304>
7. Khan KS, Wojdyla D, Say L, Gulmezoglu AM, Van Look PFA. WHO analysis of causes of maternal death: a systematic review. Lancet. 2006; 367 (9516):1066-74.
8. Brasil. Ministério da Saúde [Internet]. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. Política Nacional de Atenção Integral à Saúde da Mulher: Princípios e Diretrizes. 1nd ed., 2. reimpr. Brasília (DF): Editora do Ministério da Saúde; 2011. [cited 2013 dec 12]. Available from: http://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_mulher_principios_diretrizes.pdf
9. Brasil. Informação à Saúde [Internet]. Saúde da mulher. Políticas de assistência à mulher. Brasília(DF): Editora do Ministério da Saúde; 2012. [cited 2013 dec 8]. Available from: <http://www.brasil.gov.br/sobre/saude/saude-da-mulher>
10. Brasil. Ministério da Saúde [Internet]. Secretaria de Vigilância em Saúde. Saúde Brasil 2011: uma análise da situação de saúde e de evidências selecionadas de impacto de ações de vigilância em saúde. Mortalidade materna no Brasil: principais causas de morte e tendências temporais no período de 1990 a 2010. Brasília (DF): Editora do Ministério da Saúde; 2011. [cited 2013 dec 17]. Available from:

http://portalsaude.saude.gov.br/portalsaude/arquivos/pdf/2013/Fev/21/saudebrasil2011_parte2_cap14.pdf

11. Silva MP, Santos ZMSA, Nascimento RO, Fonteles JL. Avaliação das condutas de prevenção da Síndrome Hipertensiva Específica da Gravidez entre adolescentes. *Rev Rene Fortaleza*. 2010; 11(4): 57-65.
12. Moura RFM, Oliveira CGS, Damasceno AKC, Pereira MMQ. Fatores de risco para síndrome hipertensiva específica da gestação entre mulheres hospitalizadas com pré-eclâmpsia. *Cogitare Enferm*. 2010; 15(2):250-5.
13. Santos ZMSA, Neves MG, Nascimento JC, Fernandes HT, Feitosa JS. Autocuidado da gestante adolescente na prevenção dos fatores de risco da Síndrome Hipertensiva Específica da Gravidez (SHEG). *RBPS*. 2007; 20(3): 173-80.
14. Brasil. Ministério da Saúde [Internet]. Secretaria de Vigilância em Saúde. Departamento de Análise de Situação em Saúde. Guia de vigilância epidemiológica do óbito materno. Brasília (DF): Ministério da Saúde; 2009. (Série A. Normas e Manuais Técnicos). [cited 2013 aug 8]. Available from: http://portal.saude.gov.br/portal/arquivos/pdf/Manual_Materno.pdf
15. Chaim SRP, Oliveira SMJV, Kimura AF. Hipertensão arterial na gestação e condições neonatais ao nascimento. *Acta Paul Enferm*. 2008; 21(1):53-8.
16. Ye RW, Li HT, Ma R, Ren AG, Liu JM. Prospective cohort study of pregnancy-induced hypertension and risk of preterm delivery and low birth weight [abstract]. *Zhonghua Yu Fang Yi Xue Za Zhi*. 2010; 44(1):70-4.
17. Ziegel E. *Enfermagem obstétrica*. Rio de Janeiro: Guanabara Koogan; 2006.
18. Peracoll JC, Parpinelli MA. Síndromes hipertensivas da gestação: identificação de casos graves. *Rev Bras Ginecol Obstet*. 2005; 27(10): 627-34.
19. Luz AG, Tiago DB, Silva JCV, Amaral E. Morbidade materna grave em um hospital universitário de referência municipal em Campinas, Estado de São Paulo. *Rev Bras Ginecol Obstet*. 2008; 30(6): 281-6.
20. Soliz PP, Sanfelice C, Junges CF, Ressel LB. Caracterização de gestantes adolescentes atendidas no centro obstétrico de um hospital universitário. *R Pesq cuid fundam online* [Internet]. 2011 [cited 2013 dec 21]; 3(4): 2481-91. Available from: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/1483/pdf_454
21. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Ações Programáticas Estratégicas. *Gestação de alto risco: manual técnico - 5nd ed.* - Brasília: Editora do Ministério da Saúde; 2010.
22. Carvalho I, Santos V, Teixeira D, Carvalho J. Gynecologic and obstetric profile of pregnant women enrolled in the nursing. *R Pesq Cuid Fundam Online* [Internet]. 2011 [cited 2014 mar 21]; 3(1): 1973-82. Available from: <http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/1428>

Received on: 12/05/2014
Required for review: No
Approved on: 28/01/2015
Published on: 01/07/2015

Contact of the corresponding author:
Karen Krystine Gonçalves de Brito
Universidade Federal da Paraíba
E-mail: karen_krystine@hotmail.com